

5 WHAT IS CLAIMED IS:

1. A method comprising:

providing an integrated circuit (IC) die in a package, the IC die having a metal layer on a back surface of the IC die; and

applying a bias signal to the IC die via the metal layer.

10 2. The method of claim 1, wherein:

the package includes a heat spreader electrically coupled to the back surface of the IC die; and

the bias signal is applied via the heat spreader.

3. The method of claim 1, wherein:

15 the providing the IC die includes thinning the IC die before applying the metal layer to the back surface of the IC die.

4. The method of claim 1, wherein:

the providing the IC die includes mounting the IC die on the substrate in flip-chip fashion.

20 5. An apparatus comprising:

an integrated circuit (IC) die;

a metal layer on a back surface of the IC die;

a heat spreader conductively coupled to the metal layer; and

- 5 a bias signal source coupled to the heat spreader to supply a bias signal to the IC die via the metal layer.
6. The apparatus of claim 5, further comprising:
 a wire coupled to the heat spreader to provide the bias signal from the signal source.
- 10 7. The apparatus of claim 5, further comprising:
 a package substrate on which the IC die is mounted, the package substrate including a conductive path to provide the bias signal to the heat spreader.
8. The apparatus of claim 5, wherein the IC die includes a microprocessor.
9. An article of manufacture, comprising:
- 15 a substrate;
 an integrated circuit (IC) die mounted on the substrate;
 a metal layer on a back surface of the IC die;
 a heat spreader electrically coupled to the metal layer; and
 an electrically conductive connection to couple the heat spreader to a device
- 20 external to the IC die.
10. The article of manufacture of claim 9, wherein the electrically conductive connection passes through the substrate.

- 5 11. The article of manufacture of claim 9, wherein the electrically conductive connection includes a wire that is not part of the substrate.
12. The article of manufacture of claim 9, wherein the IC die includes a microprocessor.
13. The article of manufacture of claim 9, wherein the IC die is mounted in flip-chip fashion on the substrate.
- 10 14. The article of manufacture of claim 9, further comprising:
a layer of solder between the metal layer and the heat spreader.
15. An article of manufacture, comprising:
a substrate;
an integrated circuit (IC) die mounted on the substrate;
15 a metal layer on a back surface of the IC die;
a heat spreader electrically coupled to the metal layer; and
means for providing a signal path between the heat spreader and a device external to the IC die.
- 20 16. The article of manufacture of claim 15, wherein the means for providing a signal path includes a wire coupled to the heat spreader.
17. The article of manufacture of claim 15, wherein the means for providing a signal path includes a conductive path that passes through the substrate.

5 18. The article of manufacture of claim 15, wherein the IC die includes a
microprocessor.

19. The article of manufacture of claim 15, wherein the IC die is mounted in flip-chip
fashion on the substrate.

20. The article of manufacture of claim 15, further comprising:
10 a layer of solder between the metal layer and the heat spreader.

21. A system comprising:
a die comprising a microprocessor; and
a chipset in communication with the microprocessor;
wherein:
15 the die has a metal layer on a back surface of the die; and
the die is mounted in a package that includes:
a substrate on which the die is mounted;
a heat spreader electrically coupled to the metal layer; and
an electrically conductive connection to couple the heat spreader to
20 a device external to the die.

22. The system of claim 21, wherein the electrically conductive connection passes
through the substrate.

- 5 23. The system of claim 21, wherein the electrically conductive connection includes a wire that is not part of the substrate.
24. The system of claim 21, wherein the die is mounted in flip-chip fashion on the substrate.
25. The system of claim 21, wherein the package also includes:
- 10 a layer of solder between the metal layer and the heat spreader.